Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A computer-implemented method for providing convergence of multiple copies of a table to a same state in a database system, the database system including a plurality of nodes each having a corresponding copy of the table, the method comprising:

for each row of each table copy,

associating a timestamp with the row, the timestamp indicating a time when a change to the row has occurred;

associating a copy identification to the row, the copy identification being an identifier that uniquely identifies the table copy to which the row belongs; and

associating propagation controls with the row, the propagation controls indicating whether a change to the row should be communicated to other table copies based at least in part on the timestamp of the change or the copy identification associated with the row;

asynchronously capturing a change to a row of a given table copy from a database recovery log, the database recovery log containing an entry that describes the change to the row of the given table copy;

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system, the determination being made in accordance with the indication of the propagation controls associated with the changed row of the given table copy;

communicating the captured change to the other table copies in the database system; and

applying the communicated change to the other table copies in the database system, wherein each table copy in the database system converges to a same state.

2. (Previously Presented) The method of claim 1, wherein the timestamp comprises a monotonic number having a non-decreasing time value, wherein the time values for each table copy is in a common time base.

3. (Previously Presented) The method of claim 2, wherein associating a timestamp with the row includes associating the timestamp with the row in response to a user induced change of the row.

4. (Previously Presented) The method of claim 1, wherein the copy identification uniquely identifying each table copy has an ordering property.

5. (Previously Presented) The method of claim 4, wherein associating a copy identification to the row includes associating the copy identification to the row in response to a user induced change of the row.

6. (Original) The method of claim 1, wherein the propagation controls comprise a delete label and a conflict label.

7. (Previously Presented) The method of claim 6, wherein the delete label indicates that a row delete in a given table copy is not to be communicated to other table copies in the database system.

8. (Previously Presented) The method of claim 6, wherein the conflict label indicates that an implicit row delete in a given table copy is to be communicated to other table copies in the database system, an implicit row delete being a deletion of a row due to a conflict.

9. (Previously Presented) The method of claim 6, wherein asynchronously capturing a change to a row of a given table copy comprises:

accessing the entry of the database recovery log pertaining to the change of the row;

determining a type of change to the row;

extracting old column values and new column values of the row from the entry in the database recovery log; and

extracting changed key column values and unchanged key column values associated with the row from the entry in the database recovery log.

10. (Previously Presented) The method of claim 9, wherein the type of change to the row comprises a row insert, a row delete, a non-key update, or a key update.

11. (Previously Presented) The method of claim 10, wherein determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system comprises:

examining the type of change to the row of the given table copy, the copy identification associated with the row of the given table copy, and the propagation controls associated with the row of the given table copy.

12. (Currently Amended) The method of claim 11, wherein determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system further comprises:

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system responsive to:[[,]]

the type of change to the row being a row insert; and

the copy identification associated with the row being the same as a copy identification assigned to the given table copy.

13. (Currently Amended) The method of claim 11, wherein determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system further comprises:

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system responsive to:[[,]]

the type of change to the row being a row delete; and

the delete label associated with the row indicating that the captured change is to be communicated to the other table copies in the database system.

14. (Currently Amended) The method of claim 11, wherein determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system further comprises:

determining that the captured change to the row of the given table copy is to be communicated to other table copies responsive to:[[,]]

the type of change to the row being a non-key update or a key update;

neither the delete label nor the conflict label associated with the row indicates that the captured change is not to be communicated to other table copies in the database system; and

a new copy identification associated with the row being the same as the copy identification assigned to the given table copy.

15. (Previously Presented) The method of claim 1, wherein communicating the captured change to the other table copies in the database system comprises:

sending information associated with the captured change to the other table copies in the database system,

wherein responsive to the type of change to the row being a row insert, the information associated with the captured change comprises key column values, non-key column values, a timestamp, and a copy identification associated with the row of the given table copy.

16. (Previously Presented) The method of claim 1, wherein communicating the captured change to the other table copies in the database system comprises:

sending information associated with the captured change to the other table copies in the database system,

wherein responsive to the type of change to the row being a row delete, the information associated with the captured change comprises key column values, a timestamp, and a copy identification associated with the row of the given table copy.

17. (Previously Presented) The method of claim 1, wherein communicating the captured change to the other table copies in the database system comprises:

sending information associated with the captured change to the other table copies in the database system,

wherein responsive to the type of change being a non-key update, the information associated with the captured change comprises key column values, new non-key column values, an old timestamp, a new timestamp, an old copy identification, and a new copy identification associated with the row of the given table copy.

18. (Previously Presented) The method of claim 1, wherein communicating the captured change to the other table copies in the database system comprises:

sending information associated with the captured change to the other table copies in the database system,

wherein responsive to the type of change being a key update, the information associated with the captured change comprises old key column values, new key column values, new non-key column values, an old timestamp, a new timestamp, an old copy identification, and a new copy identification associated with the row of the given table copy.

19. (Previously Presented) The method of claim 1, wherein applying the communicated change to the other table copies in the database system comprises:

detecting a conflict for the communicated change with a row of a target table copy, the target table copy being a table copy among the other table copy in the database system at which changes are to be replicated;

determining a priority for the communicated change responsive to the conflict being detected; and

changing the row of the target table copy in accordance with the detected conflict and the determined priority for the communicated change.

20. (Currently Amended) The method of claim 19, wherein detecting a conflict for the communicated change with a row of a target table copy comprises:

responsive to the type of the communicated change being a row delete, the conflict is detected responsive to:[[,]]

no row of the target table copy with key column values matching key column values associated with the communicated change is identified; or

for a row of the target table copy with key column values matching the key column values associated with the communicated change,

a timestamp associated with the row of the target table copy does not match the timestamp associated with the communicated change; or

a copy identification of the row of the target table copy does not match a copy identification associated with the communicated change.

21. (Currently Amended) The method of claim 19, wherein detecting a conflict for the communicated change with a row of a target table copy further comprises:

responsive to the type of the communicated change being a row insert, the conflict is detected responsive to:[[,]]

a row of the target table copy with key column values matching key column values associated with the communicated change is identified.

22. (Currently Amended) The method of claim 19, wherein detecting a conflict for the communicated change with a row of a target table copy further comprises:

responsive to the type of the communicated change being a non-key update, the conflict is detected responsive to:[[,]]

no row of the target table copy with key column values matching key column values associated with the communicated change is identified; or

for a row of the target table copy with key column values matching the key column values associated with the communicated change,

a timestamp associated with the row of the target table copy does not match an old timestamp associated with the communicated change; or

a copy identification of the row of the target table copy does not match an old copy identification associated with the communicated charge.

23. (Currently Amended) The method of claim 19, wherein detecting a conflict for the communicated change with a row of a target table copy further comprises:

responsive to the type of the communicated change being a key update, the conflict is detected responsive to:[[,]]

no row of the target table copy with key column values matching old key column values associated with the communicated change is identified; or

for a row of the target table copy with key column values matching old key column values associated with the communicated change,

a timestamp associated with the row of the target table copy does not match an old timestamp associated with the communication change; or

a copy identification associated with the row of the target table copy does not match an old copy identification associated with the communicated change; or

a row of the target table copy with key column values matching new key column values associated with the communicated change is identified.

24. (Previously Presented) The method of claim 19, wherein applying the communicated change to the other table copies in the database system comprises:

assigning priority to the communicated change responsive to no conflict being detected between the communicated change and the row of the target table copy.

25. (Previously Presented) The method of claim 19, wherein determining a priority for the communicated change comprises:

assigning priority to the communicated change responsive to the type of the communication change ~~is~~ being a row insert; and

a timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy; or

the timestamp associated with the communicated change is equal to the timestamp associated with the conflicting row, and a copy identification associated with the communication change is greater than a copy identification associated with the conflicting row.

26. (Currently Amended) The method of claim 19, wherein determining a priority for the communicated change comprises:

assigning priority to the communicated change responsive to the type of the communicated change being a row delete and responsive to:[[,]]

no row in the target table copy matches key column values associated with the communicated change; or

a timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy; or

the timestamp associated with the communicated change is the same as the timestamp associated with the conflicting row and a copy identification associated with the communication change is greater than a copy identification associated with the conflicting row.

27. (Currently Amended) The method of claim 19, wherein determining a priority for the communicated change comprises:

assigning priority to the communicated change responsive to the type of the communicated change being a non-key update and responsive to:[[,]]

no row in the target table copy matches key column values associated with the communicated change; or

a timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy; or

the timestamp associated with the communicated change is the same as the timestamp associated with the conflicting row and a copy identification associated with the communicated change is greater than a copy identification associated with the conflicting row.

28. (Currently Amended) The method of claim 19, wherein determining a priority for the communicated change if the conflict is detected comprises:

assigning priority to the communicated change responsive to the type of the communicated change being a key update and responsive to:[[,]]

no row in the target table copy matching old key column values associated with the communicated change is identified; and

no row in the target table copy matching new key column values associated with the communicated change is identified; or

a new timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy with key column values matching new key column values associated with the communicated change; or

the new timestamp and copy identification associated with the communicated change matches the timestamp and copy identification associated with the conflicting row in the target table copy with key column values matching new key column values associated with the communicated change, respectively; or

an old timestamp associated with the communicated change is greater than the timestamp associated with the conflicting row in the target table copy with key columns matching old key column values associated with the communicated change; or

the timestamp associated with the communicated change matches the timestamp associated with the conflicting row and an old copy identification associated with the communicated change is greater than the copy identification associated with the conflicting row with key column values matching old key column values associated with the communicated change; and

no row in the target table copy matching new key column values associated with the communicated change is identified; or

the new timestamp associated with the communicated change is greater than the timestamp associated with the conflicting row with key column values matching the new key column values associated with the communicated change; or

the timestamp associated with the communicated change matches the timestamp associated with the conflicting row and the new copy identification associated with the communicated change is greater than the copy identification associated with the conflicting row with key column values matching the new key column values associated with the communicated change.

29. (Previously Presented) The method of claim 19, wherein changing the row of the target table copy comprises:

controlling propagation of the change applied to the target table copy;

insuring convergence of each table copy in the database system to the same state; and

installing the communicated change into the target table copy.

30. (Previously Presented) The method of claim 29, wherein controlling propagation of the change applied to the target table copy comprises:

responsive to the type of the communicated change being a row insert, setting a copy identification associated with the applied change to the target table copy to a copy identification associated with the communicated change.

31. (Previously Presented) The method of claim 29, wherein controlling propagation of the change applied to the target table copy comprises:

responsive to the type of the communicated change being a row delete, updating a row of the target table copy with key column values matching key column values associated with the communicated change by setting the delete label to indicate not to propagate the applied change.

32. (Previously Presented) The method of claim 29, wherein controlling propagation of the change applied to the target table copy comprises:

responsive to the communicated change being a non-key or key update, setting a copy identification associated with the applied change to the target table copy to the copy identification associated with the communicated change.

33. (Previously Presented) The method of claim 29, wherein insuring convergence of each table copy in the database system to the same state comprises:

insuring propagation of an implicit delete change in the target table copy by setting a conflict label of the propagation controls associated with the conflicting row when the type of the communicated change is a row insert, row delete, or non-key update assigned priority, and a copy identification associated with the conflicting row is a copy identification assigned to the target table copy.

34. (Previously Presented) The method of claim 29, wherein insuring convergence of each table copy in the database system to the same state comprises:

insuring propagation of a delete change in the target table by setting a conflict label of the propagation controls associated with the conflicting row with key column values matching old

key column values associated with the communicated change, when the type of the communicated change is a key update assigned priority, and a copy identification associated with the conflicting row matches a copy identification assigned to the target table copy; and

insuring propagation of a delete change in the target table copy by setting a conflict label of the propagation controls associated with the conflicting row with key column values matching new key column values associated with the communicated change, when the type of the communicated change is a key update assigned priority, and a copy identification associated with the conflicting row is a copy identification assigned to the target table copy.

35. (Previously Presented) The method of claim 29, wherein insuring convergence of each table copy in the database system to the same state comprises:

recording communicated old key column values, an old timestamp, and an old copy identification associated with a conflicting change in the target table copy in a delete tombstone, when the type of the communicated change is a conflicting delete or a conflicting update with conflicting communicated old timestamp or copy identification.

36. (Previously Presented) The method of claim 29, wherein insuring convergence of each table copy in the database system to the same state comprises:

checking for matching delete and suppressing application of the communication change responsive to a delete tombstone matching the new key columns, new timestamp, and new copy identification associated with the communicated change being found, when the type of the communicated change is an insert change or an update change with a conflicting insert assigned priority.

37. (Previously Presented) The method of claim 1, further comprising:

reporting each conflicting change.

38. (Previously Presented) The method of claim 37, wherein reporting each conflicting change comprises:

reporting conflicting changes of a row delete, a row insert, or a non-key update change only when priority is not assigned to the communicated change and a copy identification associated with a conflicting row in a target table copy is the copy identification assigned to the target table copy.

39. (Previously Presented) The method of claim 37, wherein reporting each conflicting change comprises:

reporting conflicting changes of a key update change only when priority is not assigned to the communicated change; and

a copy identification associated with a conflicting row in a target table copy with key column values matching old key column values associated with the communicated change is the copy identification assigned to the target table copy; or

a copy identification associated with a conflicting row with key column values matching new key column values associated with the communicated change is the copy identification assigned to the target table copy.

40. (Previously Presented) A database system, comprising:

a plurality of nodes, each node having a corresponding copy of a table, wherein each row of each table copy includes,

a timestamp with the row indicating a time when a change to the row has occurred;

a copy identification, the copy identification being an identifier that uniquely identifies the table copy to which the row belongs; and

propagation controls indicating whether a change to the row should be communicated to other table copies based at least in part on the timestamp of the change or the copy identification associated with the row;

a mechanism to asynchronously capture a change to a row of a given table copy in the database system from a database recovery log, the database recovery log containing an entry that describes the change to the row of the given table copy;

a message queue for communicating the captured change to other table copies in the database system; and

a mechanism to apply the communicated change to the other table copies in the database system, wherein each table copy in the database system converges to a same state.

41. (Previously Presented) The database system of claim 40, wherein the timestamp comprises a monotonic number having a non-decreasing time value, wherein the time values for each table copy is in a common time base.

42. (Previously Presented) The database system of claim 41, wherein the timestamp is associated with the row in response to a user induced change of the row.

43. (Previously Presented) The database system of claim 40, wherein the copy identification assigned to each table copy has an ordering property.

44. (Previously Presented) The database system of claim 40, wherein the copy identification of a given row is associated with the row in response to a user induced change of the row.

45. (Previously Presented) The database system of claim 40, wherein the propagation controls comprise a delete label and a conflict label.

46. (Previously Presented) The database system of claim 45, wherein the delete label indicates that a row delete in any of the plurality of table copies is not to be communicated to other table copies in the database system.

47. (Previously Presented) The database system of claim 45, wherein the conflict label indicates that an implicit row delete in a given table copy is to be communicated to other table copies in the database system, an implicit row delete being a deletion of a row due to a conflict.

48-49. (Cancelled)

50. (Previously Presented) A computer readable medium with program instructions tangibly stored thereon for providing convergence of multiple copies of a table to a same state in a database system, the database system including a plurality of nodes each having a corresponding copy of the table, the computer readable medium comprising instructions for:

for each row of each table copy,

associating a timestamp with the row, the timestamp indicating a time when a change to the row has occurred;

associating a copy identification to the row, the copy identification being an identifier that uniquely identifies the table copy to which the row belongs; and

associating propagation controls with the row, the propagation controls indicating whether a change to the row should be communicated to other table copies based at least in part on the timestamp of the change or the copy identification associated with the row;

asynchronously capturing a change to a row of a given table copy from a database recovery log, the database recovery log containing an entry that describes the change to the row of the given table copy;

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system, the determination being made in accordance with the indication of the propagation controls associated with the changed row of the given table copy;

communicating the captured change to the other table copies in the database system; and

applying the communicated change to the other table copies in the database system, wherein each table copy in the database system converges to a same state.

51. (Previously Presented) The computer readable medium of claim 50, wherein timestamp comprises a monotonic number having a non-decreasing time value, wherein the time values for each table copy is in a common time base.

52. (Previously Presented) The computer readable medium of claim 51, wherein the instructions for associating a timestamp with the row include instructions for associating the timestamp with the row in response to a user induced change of the row.

53. (Previously Presented) The computer readable medium of claim 50, wherein the copy identification uniquely identifying each table copy has an ordering property.

54. (Previously Presented) The computer readable medium of claim 53, wherein the instructions for associating a copy identification to the row include instructions for associating the copy identification to the row in response to a user induced change of the row.

55. (Previously Presented) The computer readable medium of claim 50, wherein the propagation controls comprise a delete label and a conflict label.

56. (Previously Presented) The computer readable medium of claim 55, wherein the delete label indicates that a row delete in a given table copy is not to be communicated to other table copies in the database system.

57. (Previously Presented) The computer readable medium of claim 55, wherein the conflict label indicates that an implicit row delete in a given table copy is to be communicated to other table copies in the database system, an implicit row delete being a deletion of a row due to a conflict.

58. (Previously Presented) The computer readable medium of claim 50, wherein the instructions for asynchronously capturing a change to a row of a given table copy include instructions for:

accessing the entry of the database recovery log pertaining to the change of the row;

determining a type of change to the row;

extracting old column values and new column values of the row from the entry in the database recovery log; and

extracting changed key column values and unchanged key column values associated with the row from the entry in the database recovery log.

59. (Previously Presented) The computer readable medium of claim 58, wherein the type of change to the row comprises a row insert, a row delete, a non-key update, or a key update.

60. (Previously Presented) The computer readable medium of claim 59, wherein the instructions for determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system include instructions for:

examining the type of change to the row of the given table copy, the copy identification associated with the row of the given table copy, and the propagation controls associated with the row of the given table copy.

61. (Currently Amended) The computer readable medium of claim 60, wherein the instructions for determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system further include instructions for:

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system responsive to:[[,]]

the type of change to the row being ~~is~~ a row insert; and

the copy identification associated with the row being the same as a copy identification assigned to the given table copy.

62. (Currently Amended) The computer readable medium of claim 60, wherein the instructions for determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system further include instructions for:

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system responsive to:[[,]]

the type of change to the row being a row delete; and

the delete label associated with the row indicating that the captured change is to be communicated to the other table copies in the database system.

63. (Currently Amended) The computer readable medium of claim 60, wherein the instructions for determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system further include instructions for:

determining that the captured change to the row of the given table copy is to be communicated to other table copies in the database system responsive to:[[,]]

the type of change to the row being a non-key update or a key update; and

neither the delete label nor the conflict label associated with the row indicates that the captured change is not to be communicated to other table copies in the database system; and

a new copy identification associated with the row is the same as the copy identification assigned to the given table copy.

64. (Previously Presented) The computer readable medium of claim 50, wherein the instructions for communicating the captured change to the other table copies in the database system include instructions for:

sending information for the captured change to the others of the plurality of table copies,

wherein responsive to the captured change being a row insert, the information comprises key column values, non-key column values, a monotonic number, and a copy identification of the captured change.

65. (Previously Presented) The computer readable medium of claim 50, wherein the instructions for communicating the captured change to the other table copies in the database system include instructions for:

sending information for the captured change to the others of the plurality of table copies,

wherein responsive to the captured change being a row delete, the information comprises key column values, a monotonic number, and a copy identification of the captured change.

66. (Previously Presented) The computer readable medium of claim 50, wherein the instructions for communicating the captured change to the other table copies in the database system include instructions for:

sending information for the captured change to the others of the plurality of table copies,

wherein responsive to the captured change being a non-key update, the information comprises key column values, new non-key column values, an old monotonic number, a new monotonic number, an old copy identification, and a new copy identification of the captured change.

67. (Previously Presented) The computer readable medium of claim 50, wherein the instructions for communicating the captured change to the other table copies in the database system include instructions for:

sending information ~~for~~ associated with the captured change to other table copies in the database system,

wherein responsive to the type of change to the row being a key update, the information associated with the captured change comprises old key column values, new key column values, new non-key column values, an old timestamp, a new timestamp, an old copy identification, and a new copy identification associated with the row of the given table copy.

68. (Previously Presented) The computer readable medium of claim 50, wherein the instructions for applying the communicated change to the other table copies in the database system include instructions for:

detecting a conflict for the communicated change with a row of a target table copy, the target table copy being a table copy among the other table copy in the database system at which changes are to be replicated;

determining a priority for the communicated change responsive to the conflict being detected; and

changing the row of the target table copy in accordance with the detected conflict and the determined priority for the communicated change.

69. (Currently Amended) The computer readable medium of claim 68, wherein the instructions for detecting a conflict for the communicated change with a row of a target table copy include instructions for:

responsive to the type of the communicated change being a row delete, the conflict is detected responsive to:[[,]]

no row of the target table copy with key column values matching key column values associated with the communicated change is identified; or

for a row of the target table copy with key column values matching the key column values associated with the communicated change,

a timestamp associated with the row of the target table copy does not match the timestamp associated with the communicated change; or

a copy identification of the row of the target table copy does not match a copy identification associated with the communicated change.

70. (Previously Presented) The computer readable medium of claim 68, wherein the instructions for detecting a conflict for the communicated change with a row of a target table copy further include instructions for:

responsive to the type of the communicated change being a row insert, the conflict is detected responsive to a row of the target table copy with key column values matching key column values associated with the communicated change being identified.

71. (Currently Amended) The computer readable medium of claim 68, wherein the instructions for detecting a conflict for the communicated change with a row of a target table copy further include instructions for:

responsive to the type of the communicated change being a non-key update, the conflict is detected responsive to:[[,]]

no rows of the target table copy with key column values matching key column values associated with the communicated change is identified; or

for a row of the target table copy with key column values matching the key column values associated with the communicated change,

a timestamp associated with the row of the target table copy does not match an old timestamp associated with the communicated change; or

a copy identification of the row of the target table copy does not match an old copy identification associated with the communicated charge.

72. (Currently Amended) The computer readable medium of claim 68, wherein the instructions for detecting a conflict for the communicated change with a row of a target table copy further include instructions for:

responsive to the type of the communicated change being a key update, the conflict is detected responsive to:[[,]]

no row of the target table copy with key column values matching old key column values associated with the communicated change is identified; or

for a row of the target table copy with key column values matching old key column values associated with the communicated change,

a timestamp associated with the row of the target table copy does not match an old timestamp associated with the communication change; or

a copy identification associated with the row of the target table copy does not match an old copy identification associated with the communicated change; or

a row of the target table copy with key column values matching new key column values associated with the communicated change is identified.

73. (Previously Presented) The computer readable medium of claim 68, wherein the instructions for applying the communicated change to the other table copies in the database system include instructions for:

assigning priority to the communicated change responsive to no conflict being detected between the communicated change and the row of the target table copy.

74. (Previously Presented) The computer readable medium of claim 68, wherein the instructions for determining a priority for the communicated change include instructions for:

assigning priority to the communicated change responsive to the type of the communication change being a row insert; and

a timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy; or

the timestamp associated with the communicated change is equal to the timestamp associated with the conflicting row; and

a copy identification associated with the communication change is greater than a copy identification associated with the conflicting row.

75. (Currently Amended) The computer readable medium of claim 68, wherein the instructions for determining a priority for the communicated change include instructions for:

assigning priority to the communicated change responsive to the type of the communicated change being a row delete and responsive to:[[,]]

no row in the target table copy matches key column values associated with the communicated change; or

a monotonic timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy; or

the timestamp associated with the communicated change is the same as the timestamp associated with the conflicting row and a copy identification associated with the communication change is greater than a copy identification associated with the conflicting row.

76. (Currently Amended) The computer readable medium of claim 68, wherein the instructions for determining a priority for the communicated change include instructions for:

assigning priority to the communicated change responsive to the type of the communicated change being a non-key update and responsive to:[[,]]

no row in the target table copy matches key column values associated with the communicated change; or

a timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy; or

the monotonic timestamp associated with the communicated change is the same as the timestamp associated with the conflicting row and a copy identification associated with the communicated change is greater than a copy identification associated with the conflicting row.

77. (Currently Amended) The computer readable medium of claim 68, wherein the instructions for determining a priority for the communicated change include instructions for:

assigning priority to the communicated change responsive to the type of the communicated change being a key update and responsive to:[[,]]

no row in the target table copy matching old key column values associated with the communicated change is identified; and

no row in the target table copy matching new key column values associated with the communicated change is identified; or

a new timestamp associated with the communicated change is greater than a timestamp associated with the conflicting row in the target table copy with key column values matching new key column values associated with the communicated change; or

the new timestamp and a copy identification associated with the communicated change matches the timestamp and copy identification associated with the conflicting row in the target table copy with key column values matching new key column values associated with the communicated change, respectively; or

an old timestamp associated with the communicated change is greater than the timestamp associated with the conflicting row in the target table copy with key columns matching old key column values associated with the communicated change; or

the timestamp associated with the communicated change matches the timestamp associated with the conflicting row and an old copy identification associated with the communicated change is greater than the copy identification associated with the conflicting row with key column values matching old key column values associated with the communicated change; and

no row in the target table copy matching new key column values associated with the communicated change is identified; or

the new timestamp associated with the communicated change is greater than the timestamp associated with the conflicting row with key column values matching the new key column values associated with the communicated change; or

the timestamp associated with the communicated change matches the timestamp associated with the conflicting row and the new copy identification associated with the communicated change is greater than the copy identification associated with the conflicting row with key column values matching the new key column values associated with the communicated change.

78. (Previously Presented) The computer readable medium of claim 68, wherein the instructions for changing the row of the target table copy include instructions for:

controlling propagation of the change applied to the target table copy;

insuring convergence of each table copy in the database system to the same state; and

installing the communicated change into the target table copy.

79. (Previously Presented) The computer readable medium of claim 78, wherein the instructions for controlling propagation of the change applied to the target table copy include instructions for:

responsive to the type of the communicated change being a row insert, setting a copy identification associated with the applied change to the target table copy to a copy identification associated with the communicated change.

80. (Previously Presented) The computer readable medium of claim 78, wherein the instructions for controlling propagation of the change applied to the target table copy include instructions for:

responsive to the type of the communicated change being a row delete, updating a row of the target table copy with key column values matching key column values associated with the communicated change by setting the delete label to indicate not to propagate the applied change.

81. (Currently Amended) The computer readable medium of claim 78, wherein the instructions for controlling ~~instruction (e3i) comprises~~ propagation of the change applied to the target table copy include instructions for:

responsive to the type of the communicated change being a non-key or key update, setting a copy identification of the applied change to the target table copy to the copy identification received with the communicated change.

82. (Previously Presented) The computer readable medium of claim 78, wherein the instructions for insuring convergence of each table copy in the database system to the same state include instructions for:

insuring propagation of an implicit delete change in the target table copy by setting a conflict label of the propagation controls associated with the conflicting row when the type of the communicated change is a row insert, a row delete, or a non-key update assigned priority and a copy identification associated with the conflicting row is a copy identification assigned to the target table copy.

83. (Previously Presented) The computer readable medium of claim 78, wherein the instructions for insuring convergence of each table copy in the database system to the same state include instructions for:

insuring propagation of a delete change in the target table by setting a conflict label of the propagation controls associated with the conflicting row with key column values matching old key column values associated with the communicated change, when the type of the communicated change is a key update assigned priority and a copy identification associated with the conflicting row matches a copy identification assigned to the target table copy.

84. (Previously Presented) The computer readable medium of claim 78, wherein the instructions for insuring convergence of each table copy in the database system to the same state include instructions for:

recording communicated old key column values, an old timestamp, and an old copy identification associated with a conflicting change in the target table copy in a delete tombstone, when the type of the communicated change is a conflicting delete or a conflicting update with conflicting communicated old timestamp or copy identification.

85. (Previously Presented) The computer readable medium of claim 78, wherein the instructions for insuring convergence of each table copy in the database system to the same state include instructions for:

checking for matching delete and suppressing application of the communication change responsive to a delete tombstone matching new key column values, new timestamp, and new copy identification associated with the communicated change is found, when the type of the

communicated change is an insert change or an update change with a conflicting insert assigned priority.

86. (Previously Presented) The computer readable medium of claim 50, further comprising instructions for:

reporting each conflicting change.

87. (Previously Presented) The computer readable medium of claim 86, wherein the instructions for reporting each conflicting change include instructions for:

reporting conflicting changes of a row delete, a row insert, or a non-key update change only when priority is not assigned to the communicated change and a copy identification ~~for~~ associated with a conflicting row in a target table copy is the copy identification assigned to the target table copy.

88. (Previously Presented) The computer readable medium of claim 86, wherein the instructions for reporting each conflicting change include instructions for:

reporting conflicting changes of a key update change only when priority is not assigned to the communicated change; and

a copy identification associated with a conflicting row in a target table copy with key column values matching old key column values associated with the communicated change is the copy identification assigned to the target table copy; or

a copy identification associated with a conflicting row with key column values matching new key column values associated with the communicated change is the copy identification assigned to the target table copy.

89-90. (Cancelled)